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| EXAMINER | |
|---|---|
| CRAIG, DWIN M | |
| **ART UNIT** | **PAPER NUMBER** |
| 2123 | 6 |

DATE MAILED: 09/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



4

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/517,465 | MAURER, MAX M. | |
| | Examiner | Art Unit | |
| | Dwin M Craig | 2123 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *7 July 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

## DETAILED ACTION

1. Claims 1-9 have been presented for reexamination based on Applicant's amended claim language. Claims 1-9 have been reconsidered and rejected.

### ***Response to Arguments***

2. Applicant's arguments filed on 7 July 2003 have been fully considered. Examiners response is as follows:

**2.1** Regarding Applicant's response to the improper incorporation by reference:

The Applicant has responded by amending the specification with the correct patent application numbers on pages 1 and 20 of the instant application. The Examiner withdraws any objection to the specification as regards improper incorporation by reference.

**2.2** Regarding Applicant's response to the corrected numbering of the Claims, specifically Claim 10.

The Applicant has responded:

> This is a response to the Office Action of April 9, 2003. Applicant acknowledges that the Office has renumbered claim 10 as filed, depending on claim 9, as claim 9 depending on claim 8, since no claim 9 was originally filed.

The Examiner asserts that the Claims are now correctly numbered.

**2.3** Regarding Applicant's response to the 35 U.S.C. 103 rejections of Claims 1, 2, 4-9 in view of the *Kahkoska et al.* reference combined with the *Kram* reference:

The Applicant has argued that:

> Kahkoska relates to a test instrument for ADSL, where a remote test instrument/modem in a central office communicates with a test instrument/modem at a customer's premises. A client PC 14 communicates with the local modem at the customer's premises (Figure 1, column 4, lines 4-6). The central office modem can test multiple ADSL circuits by communicating with multiple customer site modems via switch or router (col. 2, lines

40-50). Accordingly, Kahkoska is not concerned at all with simulating traffic of multiple virtual clients. Instead, each real client communicates with the central office modem. Other clients and servers in the customer premises may be connected to the modem via switches and hubs (column 4, lines 7-10). However, these are all real clients, not simulated clients. Regarding the Examiner's assertion that Kahkoska does not expressly disclose multiple virtual clients, Applicants believe that Kahkoska provides no disclosure or suggestion whatsoever of a technique for simulating the traffic of multiple virtual clients.

The Examiner asserts that the *Kahkoska* reference does not disclose virtual clients as disclosed in the Applicants instant specification. The Examiner asserts that the *Kram* reference was relied upon to teach the limitation of a virtual host.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Kram relates to using emulation hosts to emulate network latency, packet corruption, packet shuffling, packet loss and network congestion (abstract). The emulation hosts E1, E2 and E3 in Fig. 3 of Kram are positioned between subnet switches to introduce latency and other faults in a controlled and repeatable manner (column 6, lines 9-26). Each emulation host may be a workstation 103 (Fig. 2) to which messages are redirected from other workstations 101, 105 (column 4, line 62 to column 5, line 7). However, there is no disclosure or suggestion of simulating the traffic of multiple virtual clients, e.g., for the purpose of simulating a high load of network traffic, such as by using a split bridge as claimed. In particular, Kram does not disclose or suggest virtualizing client addresses. Kram discusses altering medium control access (MAC) address. For example, a MAC address table 201 at the workstation 101 is changed so that its packets are redirected from workstation 105 to the emulation host workstation 103. The MAC address table 203 at the workstation 103 is set so that its packets are sent to the emulation host workstation 105 after a delay (column 4, line 62 to column 5, line 12, Figure 3). Thus, Kram is only substituting one MAC address in place of another. Kram is not simulating the traffic of multiple virtual clients.

Furthermore, there is no motivation to combine Kahkoska and Kram since Kahkoska is concerned with measuring the actual performance of an ADSL circuit, e.g., the upstream and downstream throughput (abstract), while Kram is concerned with simulating network faults to see how distributed software will react. In fact, Kram specifically teaches away from using an unaltered real test network (column 1, lines 2-34).

The Examiner asserts that the *Kram* reference does not teach a virtual client host but actual client machines. The Examiner asserts that the Applicant's arguments are persuasive in that the *Kram* reference discloses actual client machines used in a network simulation and not simulated client machines. The Examiner has found Applicant's arguments to be persuasive and withdraws the earlier 35 U.S.C. 103(a) rejections of Claims 1-9.

Accordingly, claim 1 and its dependent claims 2 and 3 are believed to be clearly allowable over the prior art.

Regarding claim 4, the switches and subnet switches of Fig. 3 of Kram are not split bridges as claimed by Applicant. See Applicant's specification, e.g., page 23, lines 4-18. Furthermore, there is no disclosure or suggestion in the prior art of a simulator including a primary split bridge for passing a received broadcast message, without delay, to a respective server, and a secondary split bridge for passing the received broadcast message, with a predetermined delay, to a respective server, wherein subsequent messages are sent only to the primary split bridge, and the servers are employed for load balancing.

Regarding claim 5, the prior art fails to disclose or suggest a method for inserting simulated network frames onto a physical medium for delivery to a system under test including connecting a split bridge with a network interface card having a unique identifier to a network, receiving network frames from a frame generator coupled to the split bridge, configuring routing information in the split bridge to include identifiers associated to the network frames, where the identifiers emulate identifiers of plurality of client workstations, and forwarding received simulated network frames onto the network via the network interface card. The Examiner has not indicated how the prior art meets these limitations. Accordingly, claims 5 and 6 are believed to be clearly allowable over the prior art. Regarding claim 6, the prior art fails to disclose or suggest unique frame identifiers representing a plurality of client workstations that have been emulated.

Regarding claim 7, column 3, lines 15-25 of Kahkoska refer to measuring the time lag associated with data as it travels through a LAN. However, this is quite non-analogous to a primary split bridge transmitting a client request immediately to a first server, and a secondary split bridge transmitting the client request after a predetermined amount of time to a second server.

The Examiner asserts that current prior art of record does not disclose a *"Split-Bridge™"*, which is known in the art *(see the following new 35 U.S.C. 103 rejections)*. The Applicants arguments are persuasive and the Examiner withdraws the earlier 35 U.S.C. 103(a) rejection of Claims 1-9.

## *Specification*

**3.** The use of the trademark *Split-Bridge*™ has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner, which might adversely affect their validity as trademarks.

## *Claim Interpretation*

**4.** The claims have been given the broadest interpretation by the examiner. For the purposes of examination the examiner has determined that the term *Split-Bridge*™ as it appears in the claim language refers to a bridge/router that filters network frames onto different sub-nets in the Applicants simulated network.

## *Claim Rejections - 35 USC § 112*

**5.** **Claims 1-9** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicant's specification (pp.15) does not provide support for *Split-Bridge*™ as defined in *Ahern et al.* U.S. Patent 6,594,719 or *Conway et al.* U.S. Patent 6,418,504, such that on of ordinary skill in the art, at the time of the invention, could make and/or use the invention. It is unclear to the Examiner from both the figures and the text of the specification exactly how the *Split-Bridge*™ has been implemented in Applicant's claimed invention.

## *Claim Rejections - 35 USC § 103*

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

**6.** **Claims 1, 2, and 4-9** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Dobbelstein U.S. Patent 5,881,269** in view of **Thalheimer et al. U. S. Patent 5,996,016.**

**6.1** As regards independent **Claims 1, 4, 5, 7 and 8** the *Dobbelstein* reference discloses a network simulator inserting simulated network frames onto a physical medium **(Figure 2 ITEMs 40, 83 and 131 Col. 1 Lines 40-55, Col. 6 Lines 22-32),** a frame generator that generates simulated network frames according to a specific network protocol **(Col. 4 Lines 52-67, Col. 5 Lines 1-3),** multiple virtual clients **(Col. 7 Lines 27-32),** a unique identifier **(Figure 3 Items 55', 55'' and 55''', Col. 7 Lines 53-67, Col. 8 Lines 1-9),** and multiple virtual clients **(Col. 7 Lines 26-32).**

However, the *Dobbelstein* reference does not expressly disclose a simulated bridge/router that partitions the network.

The *Thalheimer et al.* reference discloses routing simulated network frames based ona unique identifier combined with bridge routing information associated with said one or more simulated network frames **(Figures 4, Col. 5 Lines 33-61).**

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the *Dobbelstein* reference with the *Thalheimer et al.* reference because by adding the simulation of a bridge/router the simulation of the network more closely approximates that way a real network operates by adding the bridge/router functionality.

**6.2** As regards dependent **Claim 2** the *Dobbelstein* reference does not expressly disclose a frame generator coupled to a bridge/router device.

The *Thalheimer et al.* reference discloses a frame generator coupled to a bridge/router device **(Figure 4, Col. 5 Lines 34-44).**

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the *Dobbelstein* reference with the *Thalheimer et al.* reference because by adding the simulation of a bridge/router the simulation of the network more closely approximates that way a real network operates by adding the bridge/router functionality.

**6.3** As regards independent **Claim 4** the *Dobbelstein* reference does not expressly disclose a plurality of bridges.

The *Thalheimer et al.* reference discloses a plurality of bridges **(Figure 4 Item 51).**

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the *Dobbelstein* reference with the *Thalheimer et al.* reference because by adding the simulation of a bridge/router the simulation of the network more closely approximates that way a real network operates by adding the bridge/router functionality.

**6.4** As regards independent **Claim 5** the *Dobbelstein* reference does not expressly disclose configuring routing information.

The *Thalheimer et al.* reference discloses configuring routing information **(Figures 2 & 3).**

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the *Dobbelstein* reference with the *Thalheimer et al.* reference because by adding the simulation of a bridge/router the simulation of the network more closely approximates that way a real network operates by adding the bridge/router functionality.

**6.5** As regards dependent **Claims 6 and 9** the *Dobbelstein* reference discloses receiving frames representing replies from a server designated for a plurality of client workstations **(Figures 2 & 3).**

**6.6** As regards independent **Claims 7 & 8** see paragraph **6.1** above.

**7.** Dependent **Claim 3** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Dobbelstein U.S. Patent 5,881,269** in view of **Thalheimer et al. U. S. Patent 5,996,016** and in further view of **Shmid et al. U.S. Patent 6,530,078.**

**7.1** As regards independent **Claim 1** see paragraph **6.1** above.

**7.2** As regards dependent **Claim 3** the *Dobbelstein* reference does not expressly disclose an Open System Adapter connection.

The *Shmid et al.* reference discloses an Open System Adapter connection **(Col. 9 Lines 30-47).**

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to have modified the *Dobbelstein* reference with *Shmid et al.* reference because, the *Shmid et al.* reference discloses a method to quickly migrate applications from any operating system to an OS/390 operating system ***(Shmid et al. Col. 2 Lines 24-31).***

## ***Conclusion***

**8.** An updated search has revealed new art, as a result of the new art rejections this action is made **NON-FINAL.** Claims 1-9 are rejected.

**8.1** Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwin M Craig whose telephone number is 703 305-7150. The examiner can normally be reached on 9:00 - 5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Teska can be reached on 703 305-9704. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-3900.

DMC
September 10, 2003

HUGH JONES Ph.D.
PRIMARY PATENT EXAMINER
TECHNOLOGY CENTER 2100